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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,040	08/17/2001	Fareid A. Asphahani	296	2673

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EXAMINER	
CHARIOUI, MOHAMED	
ART UNIT	**PAPER NUMBER**
2857	

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/931,040	ASPHAHANI ET AL.	
	Examiner	Art Unit	
	Mohamed Charioui	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *28 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *21-23 and 36-41* is/are allowed.

6)☒ Claim(s) *1-20 and 24-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. **Claims 36-38** are objected to because of the following informalities: in page 19, line 9, of the amendment, change "suponate" to --supinate--. Appropriate correction is required.

Claims 39 and 40 are objected to because of the following informalities: in page 20, line 18, of the amendment, change "suponate" to --supinate--. Appropriate correction is required.

Claim 41 is objected to because of the following informalities: in page 22, line 2, of the amendment, change "suponate" to --supinate--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 1-8, 10, 11, 13, 15-20 and 24-35** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirtley (US. 2003/0009308) in view of Darley et al. (US. 6,122,340) and Fyfe et al. (US. 6,301,964)

As per claims 1, 2, 5, 10, 11, 13, 15, 18, and 24-35, Kirtley teaches a portable human gait analysis apparatus for releasable securement about a user's foot that

comprises a detachable sole (see paragraph [0016]); a plantar pressure collection unit positioned between a plantar side of the user's foot and the detachable sole (see paragraph [0039]; a motion collection unit having at least one accelerometer sensor and at least one rate sensor and a lower shank motion collection unit having at least one accelerometer sensor and at least one rate sensor (see paragraphs [0004] and [0012]); a detachable processing unit in electrical communication with the plantar pressure collection unit, the motion collection unit, and the lower shank motion collection unit, the detachable processing unit for processing data from a plurality of accelerometers and sensors (see paragraphs [0013], [0020] and [0021]); a visual display unit in electrical communication with the detachable processing unit for displaying the data processed by the processing unit (see paragraphs [0003], [0017] and [0034].

Kirtley fails to explicitly teach a soft casing unit having a detachable sole cover, a detachable foot cover, a detachable shank cover, and a releasable securement means for releasably and adjustably securing the detachable sole cover, the detachable foot cover, and the detachable shank cover about the user's foot.

Darley et al. teach this structure (see col. 4, lines 40-65). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Darley et al.'s teaching into Kirtley's invention because it would provide numerous locations in the shoe where the mounting units would be secured to. Therefore, flexibility of the mounting of the device around the user's foot would be provided and accurate measurements would be taken without creating a burden on the user's foot.

Kirtley fails to explicitly teach a motion collection unit mounted in the rear of shoe.

Fyfe et al. teach this feature (see col. 9, lines 4-25; col. 4, lines 42-60; and figures 2 and 3a). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Fyfe et al.'s teaching into Kirtley's invention because it would provide a motion collection unit mounted in the rear of the shoe to collect motion data with respect to the rear of the foot. Therefore, acceleration data would be determined with respect to sole plane when the foot is tilted to monitor the human gait kinematic results and analyze its performance.

As per claims 4 and 17, Kirtley further teaches that past and current data is stored in memory, and processed by the central processing unit for comparison between use (see paragraphs [0005] and [0020].

As per claims 6 and 19, Kirtley further teaches that the data from the central processing unit passes through an I/0 unit to a telemetry unit (see paragraph [0040].

As per claims 7 and 20, Kirtley further teaches that the data from the telemetry unit is transferred to at least one of: a walkman, a TV, a VCR, a DVID player, a CID player, a projection unit, a game console, a stereo and an internet site for entertainment purposes (see paragraph [0017].

As per claim 8, Kirtley further teaches that the central processing unit processes data from the plurality of accelerators and sensors to determine pronation, supination and normal data based upon data received from the sensors (see paragraphs [0017] and [0029]).

As per claims 3 and 16, Kirtley in view of Darley et al. teach the system as stated above except for independent measurements are taken for the user's right foot and left foot, and the processing and display units function independently for each foot. Since Kirtley discloses that the system used perform and display the measurements on a single foot. It would obvious to one having ordinary skill in the art at the time the invention was made to use the same system on the other foot, because both system would be operating independently of each other. Therefore, independent measurements would be taken for the user's both right and left feet independently.

3. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kirtley in view of Darley et al. and McTeigue et al. (US. 5,372,365)

Kirtley in view of Darley et al. teach the system as stated above except that the user's body weight is calibrated by the central processing unit to provide a baseline for processing data.

McTeigue et al. teach this feature (see col. 17, line 50 to col. 18, line 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate McTeigue et al.'s teaching into the teachings of Kirtley in view of Darley et al. because the body weight must be calibrated to a predefined weight so the processor would perform more accurate calculations. Therefore, the results displayed would be meaningful and reliable in determining the user's performance.

4. **Claim 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirtley in view of Darley et al. and O'Heir (US. 5,864,333).

Kirtley in view of Darley et al. teach the system as stated above except that the plantar pressure collection unit positions force sensor resistors and pressure sensors along a first phalange, a second phalange, a third phalange, a fourth phalange in the forefoot, along a first metatarsal head, a second metatarsal head, and a fourth metatarsal head in the forefoot, along a first metatarsal base, a fourth metatarsal base and a fifth metatarsal base in the midfoot, underneath a distal portion of a medial and lateral side of a calcaneus in the midfoot, and at the medial and lateral surfaces of the calcaneus in the rearfoot, to provide accurate measurement of maximum pressure, mean pressure, and pressure line.

O'Heir teaches configuration (see col. 4, lines 23-51). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate O'Heir's teaching into the teachings of Kirtley in view of Darley et al. because it would position the shoe sole pressure sensors under every bone of the foot so that the pressure applied by the entire foot bottom will be sensed. Therefore, the measured pressure would be more accurate and result would be more meaningful and reliable in determining the user's performance.

5. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kirtley in view of Darley et al. and Gray et al. (US. 6,122,846)

Kirtley in view of Darley et al. teach the system as stated above except that the processing and display unit provides a color coded mapping data, which has been normalized by body weight calibration.

Gray et al. teach this feature (see col. 8, line 52 to col. 9, line 25). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate Gray et al.'s teaching into the teachings of Kirtley in view of Darley et al. because it would a visual indication to whether the body within the predefined calibration range or not. Therefore, the user can initiate a body weight calibration before the measurements are taken so that the results will be more accurate.

Allowable Subject Matter

6. **Claims 21-23** are allowed.

The following is a statement of reasons for the indication of allowable subject matter: none of the prior art of record teaches or suggests and LCD visual display unit in electrical communication with the detachable processing unit for displaying the data comprises vital gait information, including over-pronate, supinate, and neutral plantar pressure/distribution and the amount of eversion/inversion angle of user's foot.

Response to Arguments

6. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Regarding Applicant argument with respect to Kirtley reference (US 2003/0009308):

Applicant argues that Kirtley reference (US 2003/0009308) is not a prior art, because the Applicant has made a claim of domestic priority based on a provisional patent application filed August 18, 2000 having serial number 60/226,011 and that the

filing date of the Kirtley application is June 22, 2001, which is over 10 month after Applicant's claimed priority date.

Examiner sees that Kirtley reference is a proper prior art because Kirtley has made a claim of domestic priority based on a provisional patent application filed June 24, 2000 having serial number 60/213,981, over one month before Applicant's claimed priority. Therefore, the rejection made by the Examiner regarding claims 1-23 is proper.

35 U.S.C. 119 Benefit of earlier filing date; right of priority.
(e)
(1) An application for patent filed under section 111(a) or section 363 of this title for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in a provisional application filed under section 111(b) of this title, by an inventor or inventors named in the provisional application, shall have the same effect, as to such invention, as though filed on the date of the provisional application filed under section 111(b) of this title, if the application for patent filed under section 111(a) or section 363 of this title is filed not later than 12 months after the date on which the provisional application was filed and if it contains or is amended to contain a specific reference to the provisional application. No application shall be entitled to the benefit of an earlier filed provisional application under this subsection unless an amendment containing the specific reference to the earlier filed provisional application is submitted at such time during the pendency of the application as required by the Director. The Director may consider the failure to submit such an amendment within that time period as a waiver of any benefit under this subsection. The Director may establish procedures, including the payment of a surcharge, to accept an unintentionally delayed submission of an amendment under this subsection during the pendency of the application.
(2) A provisional application filed under section 111(b) of this title may not be relied upon in any proceeding in the Patent and Trademark Office unless the fee set forth in subparagraph (A) or (C) of section 41(a)(1) of this title has been paid.
(3) If the day that is 12 months after the filing date of a provisional application falls on a Saturday, Sunday, or Federal holiday within the District of Columbia, the period of pendency of the provisional application shall be extended to the next succeeding secular or business day.

App ndix 1 – Form Paragraph 7.82.02 (n w)

¶ *7.82.02 Copy of Provisional Application(s) Relied Upon for Prior Art Effect May Not be Supplied*

If a copy of a provisional application listed on the bottom portion of the accompanying Notice of References Cited (PTO-892) form is not included with this Office action and the PTO-892 has been annotated to indicate that the copy was not readily available, it is because the copy could not be readily obtained when the Office action was mailed. Should applicant desire a copy of such a provisional application, applicant should promptly request the copy from the Office of Public Records (OPR) in accordance with 37 CFR 1.14(a)(1)(iv), paying the required fee under 37 CFR 1.19(b)(1). If a copy is ordered from OPR, the shortened statutory period for reply to this Office action will not be reset under MPEP § 710.06 unless applicant can demonstrate a substantial delay by the Office in fulfilling the order for the copy of the provisional application. Where the applicant has been notified on the PTO-892 that a copy of the provisional application is not readily available, the provision of MPEP § 707.05(a) that a copy of the cited reference will be automatically furnished without charge will not apply.

Contact information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohamed Charioui whose telephone number is (571) 272-2213. The examiner can normally be reached Monday through Friday from 9 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S Hoff can be reached on (571) 272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mohamed Charioui
4/5/04

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